

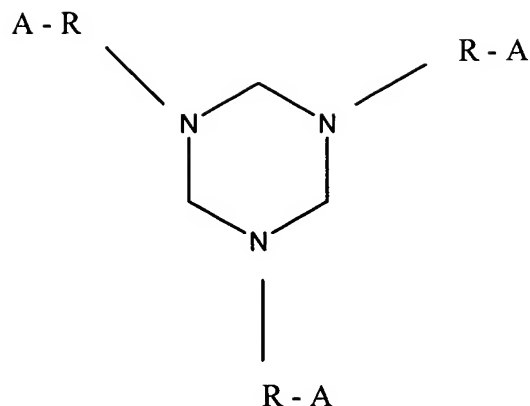
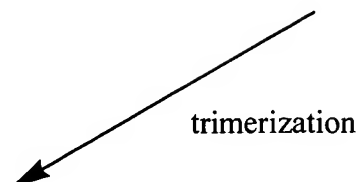
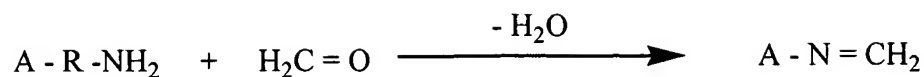
## **REMARKS**

**Claims in the Application.** Claims 2, 4, 6, 7, 16, 21 and 23 have been amended. Claims 24-25 have been added to this application. Accordingly, Claims 1-25 are active in this application.

Claims 7 and 16 have been amended to recite a formula which is more conventional of an amine oxide. (The specification has further been amended to be consistent with the formula in the amended dependent claims.) In the Advisory Action of March 30, 2006, the Examiner indicates that the amendment to the specification and the amendment to Claims 7-16 raises the issue of new matter. Applicants respectfully disagree. Claims 7 and 16 are dependent on Claims 6 and 14. Claims 6 and 14 clearly define the amine oxide by the conventional N→O nomenclature. The formula of Claims 7 and 16 is that defined in dependent in Claims 6 and 14, respectively, wherein R<sub>1</sub> is alkylamidoalkylene and R<sub>2</sub> and R<sub>3</sub> are each methyl. No new matter has been added.

**Examiner's Rejection over *Pounds*.** The Examiner in the Final Office Action rejected Claims 1, 5-6, 8-14 and 17-23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,462,721 ("*Pounds*"). The Examiner bases the rejection on the alleged disclosure in *Pounds* to the use of monoethanolamines and/or polyamines as a hydrogen scavenger. *Pounds*, however, does not disclose the use of monoethanolamines or a polyamine as a hydrogen scavenger but rather the *reaction product* of a monoethanolamine (or polyamine) and an aldehyde. The claims of Applicants recite the use of monoalkanolamines or polyamines as a hydrogen scavenger and *not* the reaction product of a monoethanolamine (or polyamine) and an aldehyde.

The reaction of a monoethanolamine and an aldehyde or polyamine may be schematically described as:



wherein A is - OH or - NH<sub>2</sub>

The reaction product of *Pounds* is described as being “stoichiometrically balanced” (col. 5, ll. 41-44); thus, no free monoethanolamine (or polyamine) or aldehyde would remain.

Further, *Pounds* does not disclose a polyamine for use as a hydrogen scavenger. While *Pounds* discloses the use of an “enhancing amine”; the disclosed “enhancing amines” are *reaction products* also. See, for instance, col. 9, ll. 5-22.

The Examiner in the Advisory Action states that “Applicant appears to admit that alkanolamines is disclosed.” While Applicants admit that *Pounds* discloses an alkanolamines *as a reactant to make a reaction product*, Applicants do not admit that *Pounds* discloses the use of an alkanolamines per se as a hydrogen scavenger. The claims of Applicants recite the use of alkanolamines and polyamines as a hydrogen scavenger. The Examiner is respectfully requested to state the portion of *Pounds* upon which he relies for the conclusion that *Pounds* discloses the use of an alkanolamines and polyamines as a hydrogen sulfide scavenger.

In the Advisory Action, the Examiner states “further process steps that would create a ‘reaction product’” are not precluded by Applicant’s claims since such claims recite

“comprising” language. The Examiner’s position is not understood. Applicant’s claims recite an alkanolamine. *Pounds* does not disclose a hydrogen sulfide scavenger of an alkanolamines. While the Examiner is correct that open claim language would not exclude reaction products, the point is that *Pounds* does not disclose an alkanolamine as a hydrogen sulfide scavenger. *Pounds* therefore cannot anticipate the claims of Applicants.

Lastly, it is noted that the Examiner has provided no basis for the rejection of Claims 5 (morpholine bottoms) and 6 (amine oxide) over *Pounds*. *Pounds* does not disclose morpholine bottoms or amine oxide as a hydrogen scavenger. The Examiner in the Advisory Action states that monoethanolamines are amine oxides. Applicants respectfully disagree. Monoethanolamines are chemically distinct from amine oxides. The Examiner is respectfully requested to provide support for the statement provided.

In summary, since *Pounds* does not disclose the use of monoethanolamines or polyamines as a hydrogen scavenger but rather the *reaction product of an aldehyde with a monoethanolamine*, the rejection of *Pounds* should not be maintained. Reconsideration is therefore requested.

**Examiner’s Rejection Over Warrender.** The Examiner further rejected Claims 1, 5-6, 8-14 and 17-23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,267,938 (“*Warrender*”).

*Warrender* discloses the use of *reaction products* of an aldehyde and an aminoethylpiperazine with an “enhancing” amine. The Examiner relies upon col. 7, ll. 26-48 of *Warrender* to support the rejection. This passage is directed to the use of alkanolamines and polyamines as “enhancing amines” (or “second amine”) and is a mere restatement of *Pounds*, discussed *supra*. Table 2, also relied upon by the Examiner, recites the use of aminoethylmorpholine as the “enhancing” amine. (Table 2 does not disclose polyamines.) According to col. 3, ll. 49-64, the second amine, like the first amine, *reacts with* the aldehyde. (See, col. 2, ll. 46-48.) Thus, *Warrender* does not disclose the hydrogen sulfide scavengers disclosed by Applicants for use in the treatment of scavenging hydrogen sulfide and/or mercaptans. Thus, the claimed method of Applicants is not anticipated by *Warrender*.

The Examiner states that “if the prior art structure is capable of performing the intended use, then it meets the claims.” The Examiner’s conclusion however is premised on the mistaken belief that *Warrender* discloses the same compounds as Applicant to treat a hydrogen sulfide

containing stream. However, *Warrender* does not disclose the compounds claimed by Applicants but rather *reaction products derived from* compounds overlapping with the claims of Applicants. *Warrender* therefore does not anticipate the claims of Applicant.

Further, the rejection of Claims 5 (morpholine) and 6 (amine oxide) is not understood since neither morpholine nor amine oxide is referenced in *Warrender*. Neither is the rejection of Claim 21 over *Warrender* understood because Claim 21 is directed to a method for scavenging mercaptans. *Warrender* is directed to a method of scavenging hydrogen sulfide and organic sulfides, not mercaptans.

**Examiner's Rejection Over Oakes.** The Examiner also rejected Claims 1, 5-6, 8-14 and 17-23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,452,764 ("*Oakes*"). The Examiner's rejection is not understood and is therefore traversed.

None of Claims 1, 5-6, 10-14, 18-20 are even remotely disclosed in *Oakes*. *Oakes*, at best, discloses inhibitors effective in alkanolamines. *Oakes* makes no reference to triazines, nitrogen heterocyclic compounds, amine oxides or polyamines.

Further, *Oakes* does not disclose the invention of Applicants defined in Claims 21-23. Alkanolamines are recited only in Applicants' Claims 8-9, 17, 21 and 23. Claims 8, 9 and 17 are dependent on Claims 21, 21 and 23, respectively. Claim 21 references the scavenging of mercaptans. *Oakes* does not disclose treatment of mercaptans, only hydrogen sulfide. Claim 23 is directed to a liquid stream. *Oakes* is only directed to the treatment of gaseous streams.

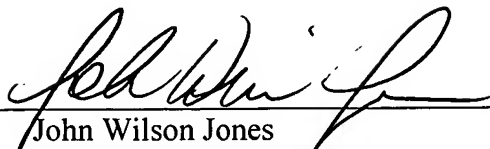
In the Advisory Action, the Examiner indicates that the arguments of Applicants are "not persuasive because Applicant appears to admit that alkanolamines are disclosed." As stated *supra*, while Applicants admit that *Oakes* discloses alkanolamines Applicants do not admit that *Oakes* discloses the use of alkanolamines for scavenging mercaptans from liquid or gaseous streams or hydrogen sulfide and/or mercaptans in a liquid stream.

Further, the Examiner's rejection of Claims 1, 5-6, 10-14 and 18-20 over *Oakes* is not understood because such claims do not even recite an alkanolamines.

**Conclusion.** The Examiner is encouraged to telephone the undersigned in order to expedite the prosecution of this application. It is believed that the claims to the amendments and the remarks expressed herein put this application in condition for allowance. Early notice to that effect is earnestly solicited.

Respectfully submitted,

Dated: May 15, 2006

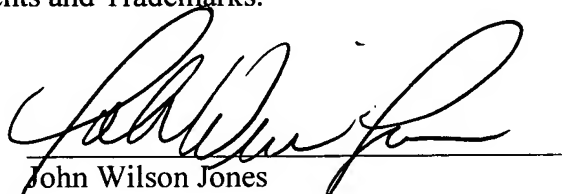
  
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**CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.6(d)**

I hereby certify that this correspondence is being mailed by first class mail on this the 15<sup>th</sup> day of May 2006 to the Commissioner of Patents and Trademarks.

May 15, 2006

  
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John Wilson Jones